

9.3 Perform Reflections

We already discussed reflecting in the x and y axis.

What happens to the coordinates when you reflect in

x-axis? $(a, b) \rightarrow (a, -b)$

y-axis? $(a, b) \rightarrow (-a, b)$

Conclusions about Reflections

If (a, b) is reflected in x-axis, its image is $(a, -b)$

If (a, b) is reflected in y-axis, its image is $(-a, b)$

If (a, b) is reflected in $y=x$, its image is (b, a)

If (a, b) is reflected in $y=-x$, its image is $(-b, -a)$

Let's reflect in the line $y=x$.

$A(-5, 6)$

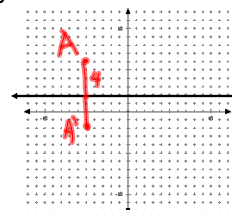
gsp

Reflect a point in a vertical or horizontal line.

$A(-5, 6)$

Reflect in the line $y = 2$

$A'(-5, -2)$

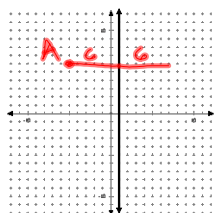


Reflect a point in a vertical or horizontal line.

$A(-5, 6)$

Reflect in the line $x = 1$

$A'(7, 6)$



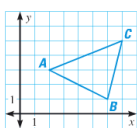
HW

p593 #s 3, 5, 9, 11, 22

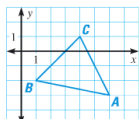
p576-577
3-6, 15-19

REFLECTIONS Graph the reflection of the polygon in the given line.

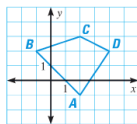
3. x -axis



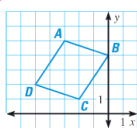
9. $y = x$



11. $y = x$



5. $y = 2$



TWO REFLECTIONS The vertices of $\triangle FGH$ are $F(3, 2)$, $G(1, 5)$, and $H(-1, 2)$. Reflect $\triangle FGH$ in the first line. Then reflect $\triangle F'G'H'$ in the second line. Graph $\triangle F'G'H'$ and $\triangle F''G''H''$.

22. In $y = 2$, then in $y = -1$

Attachments

9_3notes_examples.gsp